Remarks

In view of the above amendments and the following remarks, reconsideration and further examination are requested.

The specification has been amended so as to address the informality noted by the Examiner. No new matter has been added by this amendment. As a result, withdrawal of the objection to the specification is respectfully requested.

Claim 1 has been amended so as to include the limitations of claims 2 and 3. Claims 8 and 11 have been amended so as to be dependent from claim 1. Claims 8, 11 and 15 have also been amended for clarification purposes.

Claims 2-7, 9, 10, 12-14 and 16 have been canceled without prejudice or disclaimer to the subject matter contained therein.

New claims 17-20 have been added.

Claims 2, 5-7, 9-14 and 16 have been rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. This rejection is no longer applicable in light of the amendments to claims 1, 8, 11 and 15 and the cancellation of claims 2-7, 9, 10, 12-14 and 16.

Claim 1 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Takaishi (US 6,160,676). Claims 2, 3 and 6 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Takaishi in view of Jeppson (US 5,416,648). Claims 4 and 7-9 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Takaishi in view of Jeppson and further in view of Ueki (JP 11-016243). Claim 9 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Takaishi in view of Yamada (JP 04-129084). Claims 10-12 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Takaishi in view of Jeppson and further in view of Yamada. Claims 13-16 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Takaishi in view of Jeppson and Ueki and further in view of Yamada.

The above rejections are respectfully traversed and submitted to be inapplicable to the pending claims for the following reasons.

Claim 1 is patentable over the combination of Takaishi and Jeppson, since claim 1 recites an optical disk device including, in part, a spindle driver IC internally including a monitor circuit for monitoring a junction temperature of a chip of the spindle driver IC and a comparison circuit for comparing an output of the monitor circuit with an arbitrary set temperature and outputting a

temperature flag as a comparison result; and a CPU for controlling the operation of the optical disk device and monitoring the temperature flag outputted from the comparison circuit, the CPU performing a control so as to suppress heat generation of the spindle driver IC when the junction temperature of the chip of the spindle driver IC is equal to or higher than the arbitrary set temperature by not having the spindle driver IC perform a forced acceleration or a forced deceleration of the optical disk for an arbitrary period of time. The combination of Takaishi and Jeppson fails to disclose or suggest the CPU controlling the spindle driver IC as recited in claim 1.

In the combination, Takaishi is relied upon as disclosing a disk drive having a number of microactuator drivers 28-1–28-4 operable to drive microactuators, a temperature sensor 29 for detecting the temperature of the drivers 28-1–28-4, and MCU 22. During operation, when the temperature sensor 29 detects that the temperature of the drivers 28-1–28-4 is higher than a predetermined temperature, the MCU 22 stops controlling the microactuators via the drivers 28-1–28-4 until the temperature of the drivers 28-1–28-4 drops below the predetermined temperature. (See column 9, lines 4-29).

As admitted in the Office Action, Takaishi fails to explicitly disclose or suggest a spindle driver IC internally including a monitor circuit and a comparison circuit, or that the MCU 22 performs a control so as to suppress heat generation of a spindle driver IC when a junction temperature of a chip of the spindle driver IC is equal to or higher than an arbitrary set temperature by not having the spindle driver IC perform a forced acceleration or a forced deceleration of an optical disk for an arbitrary period of time. Instead, Takaishi discloses that the temperature sensor 29 detects the temperature of drivers 28-1–28-4, and the MCU 22 stops performing any control of the microactuators when the temperature sensor 29 detects that the temperature of the drivers 28-1–28-4 is higher than the predetermined temperature and resumes control when the temperature of the drivers 28-1–28-4 drops below the predetermined value. As a result, it is necessary that Jeppson disclose or suggest these features in order for the combination of Takaishi and Jeppson to render claim 1 obvious.

As for Jeppson, it discloses a disk drive array having a disk driver electronics chip 14, including a motor speed supervisor circuit 38, and a spin motor controller 18 for each of hard disk drives 1-5. (See column 5, lines 23-55 and Figure 1). While the disk driver electronics chip 14 and/or the spin motor controller 18 could be construed as corresponding to the claimed

spindle driver IC, it is apparent that Jeppson fails to disclose or suggest the claimed control of not having the disk driver electronics chip 14 and/or the spin motor controller 18 perform a forced acceleration or a forced deceleration of an optical disk for an arbitrary period of time when a junction temperature of a chip of the disk driver electronics chip 14 and/or the spin motor controller 18 is equal to or higher than an arbitrary set temperature. As a result, the combination of Takaishi and Jeppson fails to render claim 1 obvious.

Further, it is noted that the Office Action indicates that forced acceleration and forced deceleration of a motor is "well known" and therefore, the disclosure of the MCU 22 in Takaishi and the disk driver electronics chip 14 including the motor speed supervisor circuit 38 in Jeppson automatically result in teaching the claimed control of a spindle driver IC to not perform a forced acceleration or a forced deceleration of an optical disk when a junction temperature of a chip of the spindle driver IC is equal to or higher than an arbitrary set temperature. However, this conclusion is respectfully traversed.

As discussed above, Takaishi explicitly discloses that when the temperature sensor 29 detects that the temperature of the drivers 28-1–28-4 is above a predetermined value, the MCU 22 suspends control of the microactuators until the temperature of the drivers 28-1–28-4 drops below the predetermined value. Based on this disclosure, it is apparent that Takaishi is concerned with overheating. However, it is clear that not controlling the microactuators, as disclosed in Takaishi, differs from controlling a spindle driver IC so as to not perform a forced acceleration or a forced deceleration of an optical disk for an arbitrary period of time, as recited in claim 1. Further, the disclosure in Jeppson of the disk driver electronics chip 14 including the motor speed supervisor circuit 38 which may correspond to the claimed spindle driver IC provides no insight into how the disk driver electronics chip 14 is controlled. Therefore, the disclosure in Jeppson provides no basis for the conclusion that it would have been obvious to modify the operation of the MCU 22 so as to render claim 1 obvious.

As for Ueki and Yamada, these references are relied upon as disclosing maintaining a free run state and reducing the number of revolutions of a disk, respectively. However, neither of these references discloses or suggests the above-discussed feature of claim 1.

Because of the above-mentioned distinctions, it is believed clear that claims 1, 11, 15 and 17-20 are allowable over the references relied upon in the rejections. Furthermore, it is submitted that the distinctions are such that a person having ordinary skill in the art at the time of

invention would not have been motivated to make any combination of the references of record in such a manner as to result in, or otherwise render obvious, the present invention as recited in claims 1, 11, 15 and 17-20. Therefore, it is submitted that claims 1, 11, 15 and 17-20 are clearly allowable over the prior art of record.

In view of the above amendments and remarks, it is submitted that the present application is now in condition for allowance. The Examiner is invited to contact the undersigned by telephone if it is felt that there are issues remaining which must be resolved before allowance of the application.

Respectfully submitted,

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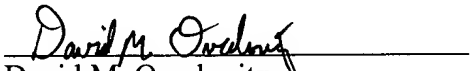
By: 
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